

## **FACT SHEET: WHAT WE LEARNED FROM PENNSYLVANIA**

In June, DEC Commissioner Joe Martens and five senior DEC staff members visited Le Roy Township in Bradford County, Pennsylvania to learn what went wrong at a well site allowing the release of high-volume hydraulic fracturing fluids. Commissioner Martens met with Pennsylvania Department of Environmental Protection officials and natural gas company representatives so that their experiences could help inform New York's 2011 Supplemental Generic Environmental Impact Statement process.

DEC did not restrict its review to that one incident. DEC staff studied incidents throughout Pennsylvania where problems occurred to assess their causes and identify solutions.

### **PREVENTING METHANE GAS MIGRATION:**

Pennsylvania Location of Incidents: Dimock Township, Susquehanna County and several additional locations in Bradford County

#### Problems identified:

- Dimock – Excessive pressures and improperly or insufficiently cemented casings
- Bradford County – Improperly cased and cemented wells

#### The 2011 SGEIS solution:

- Properly designed wells and continue the present practice of reviewing each well casing and cementing prior to issuing a permit.
- Specific requirements for cementing practices, testing and use of intermediate casing.

### **AVOIDING FRACTURING FLUID RELEASES:**

Pennsylvania Location of Incident: Dimock Township, Susquehanna County and Le Roy Township, Bradford County

#### Problems identified:

- Dimock – Equipment failures resulting from pressure surges when transferring water due to poor site design
- Le Roy – Wellhead equipment failure and stormwater controls failure

#### The 2011 SGEIS requires:

- DEC staff site visit prior to well pad construction to review well site layout to ensure it is properly designed and to determine site-specific permit conditions
- Pressure testing of fracturing equipment after installation and prior to hydraulic fracturing operations
- New stormwater permit required to include strict design measures to prevent failure of stormwater controls and potential fluid flow to offsite water sources

The site layout of the Dimock, PA well would not have been approved in New York.

### **PREVENTING UNCONTROLLED WELLBORE RELEASE OF FLOWBACK WATER AND BRINE:**

Pennsylvania Location of Incident: Lawrence Township, Clearfield County

Problems identified: Inadequate blowout prevention equipment and certified well control personnel were not on site

The 2011 SGEIS requires:

- Pressure testing of blowout prevention equipment
- Using specialized equipment designed for entering the wellbore when pressure is anticipated
- A certified well control specialist to be present during post-fracturing cleanout activities

### **AVERTING HIGH TOTAL DISSOLVED SOLIDS (TDS) DISCHARGES:**

Pennsylvania Location of Incident: Monongahela River, Port Marion, Fayette County

Problems Identified: Pennsylvania lacked regulations for surface water quality standards, including any regulations to address wastewater treatment plants' discharging of high-TDS wastewater from Marcellus Shale activities

The 2011 SGEIS requires:

- A new, robust permitting and approval process for any proposal to discharge flowback water or brine to wastewater treatment plants
- In-stream limits for TDS
- State Pollutant Discharge Elimination System (SPDES) permit which limits TDS based on a stream's capacity to assimilate TDS